E/ECE/324
E/ECE/TRANS/505 } Rev.1/Add.35/Rev.1/Amend.1

4 November 1998

AGREEMENT

CONCERNING THE ADOPTION OF UNIFORM TECHNICAL PRESCRIPTIONS FOR WHEELED VEHICLES, EQUIPMENT AND PARTS WHICH CAN BE FITTED AND/OR BE USED ON WHEELED VEHICLES AND THE CONDITIONS FOR RECIPROCAL RECOGNITION OF APPROVALS GRANTED ON THE BASIS OF THESE PRESCRIPTIONS*/

(Revision 2, including the amendments entered into force on 16 October 1995)

Addendum 35: Regulation No. 36

Revision 1 - Amendment 1

Incorporating:

Supplement 1 to the 03 series of amendments - Date of entry into force: 14 May 1998
Supplement 2 to the 03 series of amendments - Date of entry into force: 6 August 1998

UNIFORM PROVISIONS CONCERNING THE APPROVAL OF LARGE PASSENGER VEHICLES WITH REGARD TO THEIR GENERAL CONSTRUCTION

UNITED NATIONS

---

*/ Former title of the Agreement:

Agreement Concerning the Adoption of Uniform Conditions of Approval and Reciprocal Recognition of Approval for Motor Vehicle Equipment and Parts, done at Geneva on 20 March 1958.

Paragraph 1, amend to read:

"... and having a capacity in excess of 22 passengers, whether seated or standing, in addition to the driver, ..."

Paragraph 2.1., amend to read:

"2.1. "Vehicle" means a vehicle designed and equipped for the transport of more than 22 passengers. There are ..."

Paragraphs 2.1.1. to 2.1.3., amend to read:

"2.1.1. "Class I" Vehicles constructed with areas for standing passengers, to allow frequent passenger movement;

2.1.2. "Class II" Vehicles constructed principally for the carriage of seated passengers, and designed to allow the carriage of standing passengers in the gangway and/or in a standing area which does not exceed the space provided for two double seats;

2.1.3. "Class III" Vehicles constructed exclusively for the carriage of seated passengers."

Insert a new paragraph 2.1.5., to read:

"2.1.5. "Low floor vehicle" means a vehicle in which at least 35 per cent of the area available for standing passengers (or of its forward section in the case of articulated vehicles) forms a single area without steps, reached through at least one service door by a single step from the ground."

Paragraph 2.14., amend to read:

"2.14. "Access passage" means the space extending inwards into the vehicle from the service door up to the outermost edge of the upper step (edge of the gangway). Where there is no step at the door, the space to be considered as access passage shall be that which is measured according to paragraph 5.7.1.1. up to a distance of 30 cm from the starting position of the inner face of the dual panel."

Paragraph 2.16., amend to read:

"2.16. "Unladen kerb mass" (MK) (kg) means the mass of the vehicle in running order, unoccupied and unladen but with the addition of 75 kg for the mass of the driver, the mass of fuel corresponding to 90 per cent of the capacity of the fuel tank specified by the manufacturer, and the masses of coolant, lubricant, tools and spare wheel, if any;

2.16.1. "Unladen mass" (MV) (kg) means the unladen kerb mass (MK) (kg) of the vehicle as defined in paragraph 2.16., with the addition of 75 kg for the mass of the crew member corresponding to the seat, if any, specially assigned to this crew member as described in paragraph 5.7.1.8. The vehicle shall be complete with 90 per cent of the capacity of all additional liquid tanks (e.g. fuel for combustion heaters, screen washers, etc.). Where facilities such as a kitchen or toilet are fitted, the fresh water tanks shall be full and the waste tanks empty."

Paragraph 2.17., amend to read:

"2.17. "Technically permissible maximum mass" means the maximum mass declared by the manufacturer of the vehicle. (This mass may be greater than the "permissible maximum mass" to be prescribed by national administrations)."

Paragraph 2.18., amend to read:

"2.18. "Technically permissible maximum axle mass" means that part of the technically permissible maximum mass of the vehicle, declared by the manufacturer, which results in the vertical force at the road surface in the contact area on the wheel/wheels of an axle. This mass may be greater than the maximum permissible axle mass authorized by national administrations. The sum of all technically permissible maximum axle masses of the vehicle may be greater than the technically permissible maximum mass of that vehicle."

Paragraphs 2.18. to 2.22. (former), renumber as paragraphs 2.19. to 2.23.

Insert new paragraphs 2.24. and 2.25., to read:

"2.24. Unless otherwise stated, all measurements shall be made when the vehicle is at its unladen kerb mass (MK) (kg) and it is standing on a smooth and horizontal ground surface. If a kneeling system is fitted to the vehicle, it shall not be in operation.

2.25. Wherever there is a requirement in this Regulation for a surface in the vehicle to be horizontal or at a specific angle when the vehicle is at its unladen kerb mass (MK) (kg), in the case of a vehicle with mechanical suspension, the surface may exceed this slope or possess a slope when the vehicle is at its unladen kerb mass (MK) (kg), provided that this requirement is met when the vehicle is in the loading condition declared by the manufacturer. If a kneeling system is fitted to the vehicle, it shall not be in operation."

Paragraph 3.2.3.3., amend to read:

"3.2.3.3. the unladen mass of the vehicle (MV) (kg);"

Paragraph 3.2.9., amend to read:

"3.2.9. the number of seating places intended for use by passengers and crew (if any). Sleeping places and other accommodations which are intended to be temporarily used instead of a seating place shall not count as seating places."

Paragraph 4.4.1., amend to read:

"..... 24 for Ireland, 25 for Croatia, 26 for Slovenia, 27 for Slovakia, 28 for Belarus, 29 for Estonia, 30 (vacant), 31 for Bosnia and Herzegovina, 32-36 (vacant), 37 for Turkey, 38-39 (vacant), 40 for The former Yugoslav Republic of Macedonia, 41 (vacant), 42 for the European Community (Approvals are granted by its Member States using their respective ECE symbol) and 43 for Japan. Subsequent numbers ..... to the Agreement Concerning the Adoption of Uniform Technical Prescriptions for Wheeled Vehicles, Equipment and Parts which can be Fitted and/or be Used on Wheeled Vehicles and the Conditions for Reciprocal Recognition of Approvals Granted on the Basis of these Prescriptions, ..."

Paragraph 5.1.1.3. should be deleted.

Paragraph 5.1.3., amend to read:

"5.1.3. Unladen, for the purpose of this paragraph (5.1.) and paragraph 5.3., means the vehicle in the condition described in paragraph 2.16.1."

Paragraph 5.2.2.1.2., amend to read:

"5.2.2.1.2. the area of all parts which are not accessible to a standing passenger when all the seats are occupied, with the exception of folding seats;"

Paragraph 5.2.2.1.5., amend to read:

"5.2.2.1.5. the area 30 cm in front of all seats other than folding seats;"

Paragraph 5.2.2.1.6., amend to read:

"5.2.2.1.6. any surface not being excluded by the provisions in paragraphs 5.2.2.1.1. to 5.2.2.1.5. above, on which it is not possible to place a rectangle of 400 mm x 300 mm;"

Paragraph 5.2.2.1.7. should be deleted.

Paragraph 5.2.2.1.8. renumber as paragraph 5.2.2.1.7.

Paragraphs 5.3. to 5.3.3., amend to read:

"5.3. Passenger capacity

5.3.1. There shall be on the vehicle a number (P_s) of seating places (see para. 3.2.9. above), other than folding seats, which conform to the requirements of paragraph 5.7.8. If the vehicle is of Class I or Class II, the number P_s shall be at least equal to the number of square metres of floor available for passengers and crew (if any) (S_o) rounded down to the nearest whole number; the required number may be reduced by 10 per cent in the case of Class I vehicles (0.9 S_o).

5.3.2. The total number N of seating and standing places in vehicles shall be calculated such that both of the following conditions are fulfilled:

$$N \leq P_s + \frac{S_1}{S_{sp}}$$

and

$$N \leq \frac{MT - MV - L \cdot V - R \cdot VX}{Q}$$

where:

P_s = Number of seating places (see paragraphs 3.2.9. and 5.3.1.);

S_1 = Surface area (m^2) (see paragraph 5.2.2.) available for standing passengers;

S_{sp} = Area assumed for one standing passenger (m^2/standing passenger) (see paragraph 5.3.2.2.);

MT = Technically permissible maximum mass (kg) (see paragraph 2.17.);

MV = Unladen mass (kg) as defined in paragraph 2.16.1.;

L = Specific load of baggage (kg/m^3) in the baggage compartment(s);

V = Total volume (m^3) of the baggage compartments (see paragraph 3.2.5.);

R = Specific mass of baggage in the roof area (kg/m^2);

VX = Total surface area (m^2) available for baggage to be carried on the roof (see paragraph 3.2.6.);

Q = Mass (kg) assumed for the load on each passenger seating and standing place, if any (see paragraph 5.3.2.2.).

5.3.2.1. In the case of Class III vehicles, $S_1 = 0$.

5.3.2.2. The values of Q, S_{sp}, L and R for every class of vehicle are as follows:

Class	Q (kg)	S_{sp} (m^2/standing passenger)	L (kg/m^3)	R (kg/m^2)
I	68	0,125	100	75
II	71 */	0,150	100	75
III	71 */	(no standing passengers)	100	75

*/ Including 3 kg of hand baggage."

5.3.2.3. If a vehicle of Class II or Class III is approved as a Class I vehicle, the mass of baggage carried in the baggage compartments accessible only from outside the vehicle is not taken into account.

5.3.3. When calculated according to paragraph 5.3.2., the mass on each axle of the vehicle shall not exceed the values of their respective technically permissible maximum values."

Insert a new paragraph 5.3.4., to read:

"5.3.4. The vehicle shall be clearly marked in a manner visible on the inside in the vicinity of the front door in letters or pictograms not less than 15 mm high and numbers not less than 25 mm high, with

5.3.4.1. the number of seating places for which the vehicle is designed (P_s);

5.3.4.2. the total number of passengers for which the vehicle is designed (N);

Paragraph 5.6.1.1., amend the table to read:

"

Number of passengers	Number of service doors		
	Class I	Class II	Class III
23 - 45	1	1	1
46 - 70	2	1	1
71 - 100	3	2	1
> 100	4	3	1

"

Paragraph 5.6.1.5., amend the table to read:

"

Number of passengers	Minimum total number of exits
23 - 30	4
31 - 45	5
46 - 60	6
61 - 75	7
76 - 90	8
> 90	9

"

Paragraph 5.6.1.9., the words "In such cases" should be deleted.

Paragraph 5.6.2.2., amend to read:

"... not less than 40 per cent of the overall length of the passenger compartment measured parallel to the longitudinal axis of the vehicle. If one of these two doors forms part of a double door, ..."

Insert a new paragraph 5.7.1.9., to read:

"5.7.1.9. The maximum slope of the floor in the access passage shall not exceed 5 per cent when the unladen vehicle is standing on a smooth and horizontal surface in its normal condition of travel (in particular: any kneeling device shall not be engaged)."

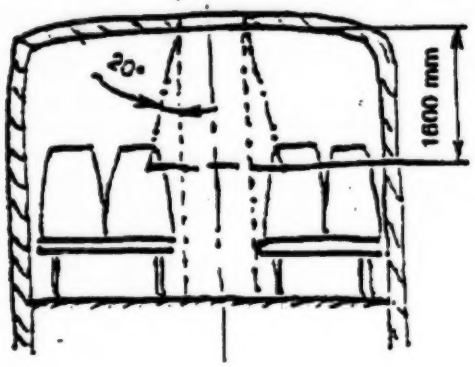
Insert a new paragraph 5.7.1.10., to read:

"5.7.1.10. Gangways and access passages shall be covered with an anti-slip material."

Paragraph 5.7.4., amend to read:

"5.7.4. Access to escape hatches

5.7.4.1. Except in the case of Class I vehicles, at least one escape hatch shall be located such that a four-sided truncated pyramid having a side angle of 20° and a height of 1,600 mm touches part of a seat or equivalent support. The axis of the pyramid shall be vertical and its smaller section shall contact the aperture area of the escape hatch. Supports may be foldable or movable provided they can be locked in their position of use. This position shall be taken for verification.



5.7.4.2. When the structural thickness of the roof is more than 150 mm, the smaller section of the pyramid shall contact the aperture area of the escape hatch at the level of the outside surface of the roof."

Paragraphs 5.7.6. to 5.7.6.2., amend to read:

"5.7.6. Slope of gangway

The slope of gangway shall not exceed:

5.7.6.1. In the longitudinal direction:

5.7.6.1.1. 8 per cent in the case of a vehicle of Class I or Class II, or

5.7.6.1.2. 12.5 per cent in the case of a vehicle of Class III.

5.7.6.2. In the transversal direction 5 per cent for all classes."

Insert a new paragraph 5.7.7.3., to read:

"5.7.7.3. Any transition from a sunken gangway to a seating area shall not be considered to be a step. However, the vertical distance between the gangway surface and the floor of the seating area shall not exceed 35 cm."

Paragraphs 5.7.7.3 to 5.7.7.4 (former), renumber as paragraphs 5.7.7.4. to 5.7.7.6.

Insert a new paragraph 5.7.7.7., to read:

"5.7.7.7. The maximum slope of the step in any direction shall not exceed 5 per cent when the unladen vehicle is standing on a smooth and horizontal surface in its normal condition of travel (in particular: any kneeling device shall not be engaged)."

Paragraph 5.7.8., amend to read:

"5.7.8. Passenger seats (including folding seats) and space for seated passengers"

Paragraph 5.7.8.6.2.3., amend to read:

"5.7.8.6.2.3. Intrusion of a conduit (e.g. for hot air) situated in the lower part of the space in question, adjacent to the sidewall of the vehicle, of a cross-sectional area not exceeding 200 cm^2 and having a maximum width of 10 cm (see annex 3, figure 11)."

Insert a new paragraph 5.7.8.6.2.4., to read:

"5.7.8.6.2.4. Intrusion of hopper type windows when open and their fittings."

Paragraphs 5.10.1. and 5.10.2., amend to read:

"5.10.1. The vehicle shall be able to manoeuvre on either lock inside a circle of 12.5 m radius without any of its outermost points projecting outside the circumference of the circle.

5.10.2. When the outermost points of the vehicle are moving on either lock on a circle of 12.5 m radius the vehicle shall be able to move within the limits of a circular track 7.2 m wide (see annex 4, figure A/B)."

Paragraph 5.10.3., amend to read:

"5.10.3. With the vehicle stationary, a vertical plane tangential to the side of the vehicle and facing outwards from the circle shall be established by marking a line on the ground. In the case of an articulated vehicle the two rigid portions shall be aligned with

the plane. When the vehicle moves from a straight line approach into the circular area described in paragraphs 5.10.1. and 5.10.2. above, no part of it shall move outside of this vertical plane by more than 0.8 m (see annex 4. figure A) in the case of a rigid vehicle, or by more than 1.2 m (see annex 4, figure B) in the case of an articulated vehicle."

Annex 1,

Item 7, amend to read:

"7. Unladen mass (MV): . . . . . (kg)"

Item 9.1., correct to read:

"9.1. total (S_o): . . . . . (m^2)"

Items 10. to 10.8., replace by the following text:

"10. Calculated values:

10.1. Number of seating and standing places according to paragraph 5.3.2. of this Regulation:

10.1.1. Total ($N = P_s + P_{st}$): . . . . . .

10.1.2. Seating places (P_s): . . . . . .

10.1.3. Standing places (P_{st}): . . . . . .

10.2. Masses according to paragraph 5.3.3. of this Regulation:

10.2.1. Total vehicle mass: . . . . . (kg)

10.2.2. First axle mass: . . . . . (kg)

10.2.3. Second axle mass: . . . . . (kg)

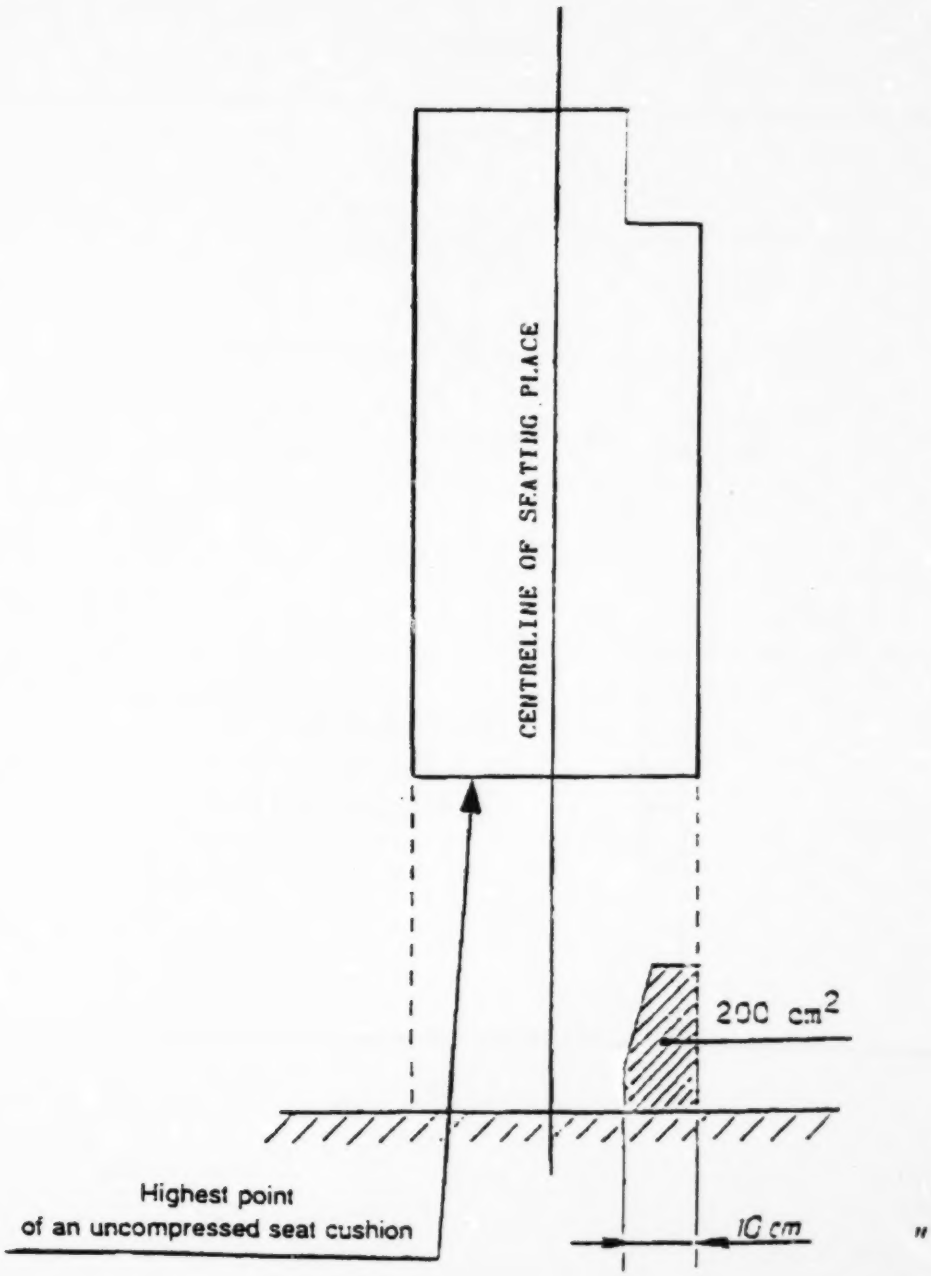
10.2.4. Third axle mass (if any): . . . . . (kg)

10.2.5. Fourth axle mass (if any): . . . . . (kg)"

Annex 3, figure 11, replace by the following figure:

"Figure 11

PERMITTED INTRUSION OF A CONDUIT
(see paragraph 5.7.8.6.2.3.)



"

Annex 4, figures A and B, replace by the following figures (figure C being deleted):

"Annex 4

MANOEUVRABILITY
(see paragraph 5.10.)

Figure A

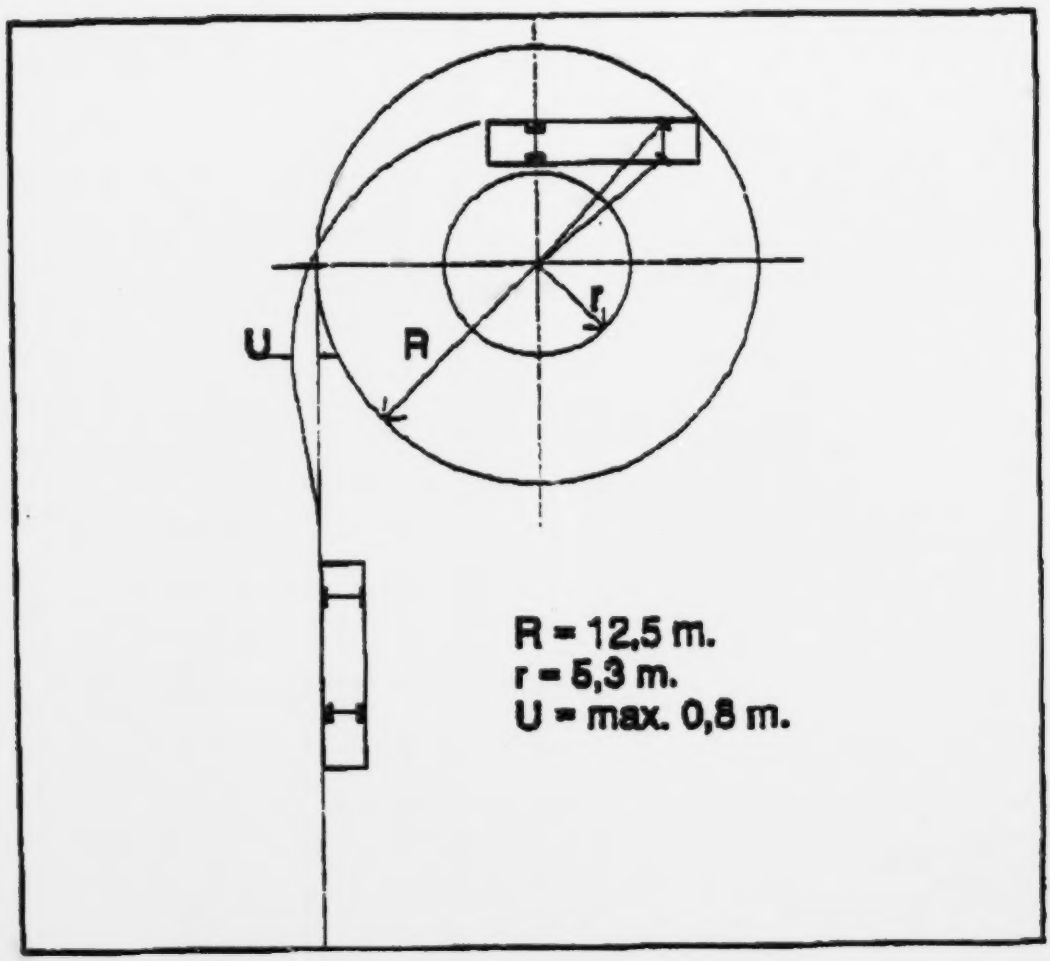
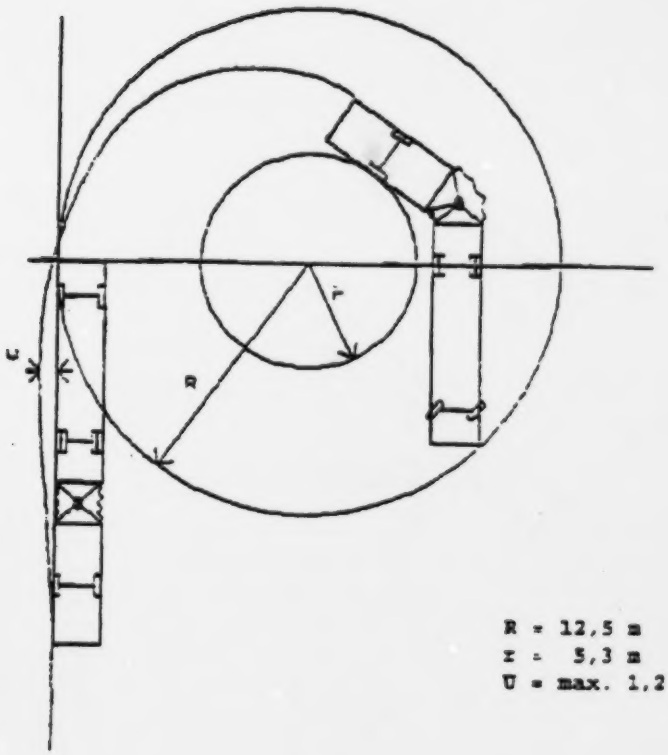


Figure B



R = 12,5 m
r = 5,3 m
U = max. 1,2 m.

"

Annex 5, replace by the following:

"Annex 5

TESTING DEVICE FOR SITING OF HAND-RAILS AND HAND-HOLDS
(see paragraph 5.12.2.1.)